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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,565	05/19/2005	John Dion	20020049	7683

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EXAMINER	
SONG, SARAH U	

ART UNIT	PAPER NUMBER
2874	

DATE MAILED: 03/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/535,565	DION ET AL.	
	Examiner	Art Unit	
	Sarah Song	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-20 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-20 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 19 May 2005 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 0505.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The prior art documents submitted by the applicant in the Information Disclosure Statement filed on May 19, 2005 have all been considered and made of record (note the attached copy of form PTO-1449).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sayegh (U.S. Patent 5,002,359).**

6. Regarding claims 17-20, Sayegh discloses a light transmitting element comprising: an elongated glass fiber core 1, a medial cushioning layer 5 concentrically surrounding the glass fiber core, and an outer hard shell material 6 surrounding the medial cushioning layer; wherein

the medial cushioning layer of the optical element comprises polytetrafluorethylene (column 2, lines 23-33); wherein the outer hard shell layer of the optical element comprises polyetheretherketone (column 2, lines 65-68); and wherein the optical element has a layer 3 selected from an acylate and a polyimide interposed between the glass core and the cushioning layer (column 2, lines 6-10).

7. **Claims 1, 4, 5, 8 and 9 are rejected under 35 U.S.C. 102(e) as being unpatentable over Mydur et al. (U.S. Patent 6,600,108).**

8. Regarding claims 1, 4, 5, 8 and 9, Mydur et al. discloses an electro-optical cable an optical element 402 comprising an elongated glass fiber core 406, a medial cushioning layer 410 concentrically surrounding the glass fiber core, and an outer hard shell material 408 surrounding the medial cushioning layer; and at least one electrically conductive element 404 comprising an elongated conductive core and a dielectric layer concentrically surrounding the electrically conductive core. The conductive core comprises a plurality of copper wires (column 4, lines 38-41); the dielectric layer of the electrically conductive element comprises dielectric PTFE (column 4, lines 51-59). The cable also has an outer peripheral protective jacket 120, 122. See Figure 4.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. **Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mydur et al.**

11. Regarding claim 16, Mydur et al. discloses a dual layer dielectric surrounding the conductive element, but does not expressly disclose the electrically conductive element having a layer of aromatic co-polyimide concentrically surrounding the dielectric layer. However, the aromatic co-polyimide would have been obvious to one of ordinary skill in the art since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. See MPEP 2144.07.

12. **Claims 2, 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mydur et al. as applied to claim 1 above, and further in view of Sayegh.**

13. Mydur et al. discloses the claimed invention as discussed above, but does not expressly disclose the optical element comprising a PTFE medial cushioning layer, and a PEEK outer hard layer, a layer polyimide interposed between the glass core and the cushioning layer.

14. Sayegh discloses a light transmitting element comprising: an elongated glass fiber core 1, a medial cushioning layer 5 concentrically surrounding the glass fiber core, and an outer hard shell material 6 surrounding the medial cushioning layer; wherein the medial cushioning layer of the optical element comprises polytetrafluorethylene (column 2, lines 23-33); wherein the outer hard shell layer of the optical element comprises polyetheretherketone (column 2, lines 65-68); and wherein the optical element has a layer 3 selected from an acylate and a polyimide interposed between the glass core and the cushioning layer (column 2, lines 6-10).

15. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the optical cable of Sayegh in the electro-optical cable of

Mydur et al. for the purpose of providing a fiber cable of reduced stress and strong environmental protection.

16. **Claims 10-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mydur et al. in view of Sayegh.**

17. Regarding claims 10-12, 15 and 16, Mydur et al. discloses an electro-optical cable an optical element 402 comprising an elongated glass fiber core 406, a medial cushioning layer 410 concentrically surrounding the glass fiber core, and an outer hard shell material 408 surrounding the medial cushioning layer; and at least one electrically conductive element 404 comprising an elongated conductive core and a dielectric layer concentrically surrounding the electrically conductive core. The conductive core comprises a plurality of copper wires (column 4, lines 38-41); the dielectric layer of the electrically conductive element comprises dielectric PTFE (column 4, lines 51-59). The cable also has an outer peripheral protective jacket 120, 122. See Figure 4.

18. Mydur et al. does not expressly disclose the optical element comprising a PTFE medial cushioning layer, and a PEEK outer hard layer, a layer polyimide interposed between the glass core and the cushioning layer.

19. Sayegh discloses a light transmitting element comprising: an elongated glass fiber core 1, a medial cushioning layer 5 concentrically surrounding the glass fiber core, and an outer hard shell material 6 surrounding the medial cushioning layer; wherein the medial cushioning layer of the optical element comprises polytetrafluorethylene (column 2, lines 23-33); wherein the outer hard shell layer of the optical element comprises polyetheretherketone (column 2, lines 65-68);

and wherein the optical element has a layer 3 selected from an acylate and a polyimide interposed between the glass core and the cushioning layer (column 2, lines 6-10).

20. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the optical cable of Sayegh in the electro-optical cable of Mydur et al. for the purpose of providing a fiber cable of reduced stress and strong environmental protection.

21. Regarding claim 16, Mydur et al. discloses a dual layer dielectric surrounding the conductive element, but does not expressly disclose the electrically conductive element having a layer of aromatic co-polyimide concentrically surrounding the dielectric layer. However, the aromatic co-polyimide would have been obvious to one of ordinary skill in the art since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. See MPEP 2144.07.

Conclusion

22. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Song whose telephone number is 571-272-2359. The examiner can normally be reached on M-Th 7:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sarah Song
Primary Examiner
Group Art Unit 2874